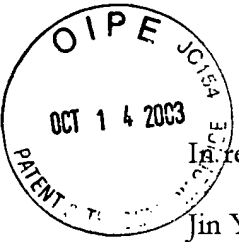


Docket No.: K-0229

PATENT

AF/2673
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of

Jin Young Kim and Seong Ho KANG

Application No.: 09/695,976

Confirm. No.: 2954

Filed: 10/26/2000

For: STRUCTURE AND DRIVING METHOD OF PLASMA DISPLAY PANEL

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: Group Art Unit: 2673
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: Examiner: N. Patel
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: Customer No.: 34610
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TRANSMITTAL OF APPEAL BRIEF

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Crystal Plaza Two, Lobby, Room 1B03
Arlington, Virginia 22202

Sir:

Submitted herewith in triplicate is Appellant(s) Appeal Brief in support of the Notice of Appeal filed August 15, 2003. Enclosed is Check No. 10396 for the Appeal Brief fee of \$330.00.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

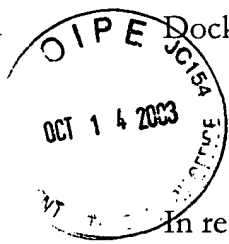
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Date: October 14, 2003

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Patel



Docket No.: K-229

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

In re Application of

Jin Young KIM and Seong Ho KANG

Serial No.: 09/695,976

Confirm. No.: 2954

Filed: October 26, 2000

For: **STRUCTURE AND DRIVING METHOD OF PLASMA DISPLAY
PANEL**

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APPEAL BRIEF

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Arlington, VA 22202

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed August 15, 2003.

REAL PARTY IN INTEREST

The party in interest is the assignee, LG Electronics Inc.

RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

Serial No. 09/695,976

Docket No. K-229

STATUS OF THE CLAIMS

This is an appeal from the Office Action dated May 15, 2003 of claims 1-46. No other claims are pending.

STATUS OF AMENDMENTS

All Amendments filed in this application have been entered. A correct copy of appealed claims 1-46, including all entered amendments thereto, appears in the attached Appendix.

SUMMARY OF THE INVENTION

In embodiments, a plasma display operates as a high definition display device. [Specification, page 1, lines 9-10]. In embodiments, a plasma display operates by generating light at pixels of the plasma display. Specifically, a plasma display may include a large number of pixels, each including a plurality of electrodes. Each electrode of the pixel may receive voltage signals which may cause a discharge which may then cause generation of light. [Specification, page 2, lines 3-7]. [Specification, page 3, lines 16-25]. However, an undesirable time lag may exist between the discharge and the generation of light in a pixel. This undesirable time lag may be due to an insufficient concentration of priming particles at the time of discharge at a pixel. For example, if a sufficient concentration of priming particles does not exist, a time lag of 3 microseconds to 4 microseconds may exist. However, if a sufficient number of priming particles do exist, the time lag may be in the range of several hundreds of nanoseconds, which is more

desirable. [Specification, page 7, lines 8-17]. Accordingly, embodiments of the present invention include priming electrodes which increase an amount of priming particles in a discharge cell to reduce discharge lag. [Specification, page 14, lines 1-12].

ISSUES

- Issue 1) Whether the Examiner erred in the rejection of claims 1-2, 5-6, and 46 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose "...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag..."
- Issue 2) Whether the Examiner erred in the rejection of claims 7-14 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose "...a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag..."
- Issue 3) Whether the Examiner erred in the rejection of claims 15-29 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose an "...electrode configured to increase the amount of priming particles in a discharge cell to reduce discharge lag..."

Serial No. 09/695,976

Docket No. K-229

Issue 4) Whether the Examiner erred in the rejection of claims 30-44 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose “...priming particles in a discharge cell in response to an electrical pulse applied to [an]...electrode to reduce discharge lag.”

Issue 5) Whether the Examiner erred in the rejection of claim 45 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose “...a means of forming priming particles in [a] discharge cell to reduce discharge lag.”

Issue 6) Whether the Examiner erred in the rejection of claims 3 and 4 under 35 U.S.C. § 103(a) because neither Hashimoto et al. (U.S. Patent No. 6,369,781) nor Khan et al. (U.S. Patent No. 6,433,471) disclose “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”

GROUPING OF THE CLAIMS

Claims 1-2, 5-6, and 46 form a single group and stand or fall together. Claims 3-4 form a single group and stand or fall together. Claims 7-14 form a single group and stand or fall together. Claims 15-29 form a single group and stand or fall together. Claims 30-44 form a single group and stand or fall together. Claim 45 forms a single group and stands or falls

independently.

THE ARGUMENT

Argument 1) **The Examiner erred in the rejection of claims 1-2, 5-6, and 46 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”**

To establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must describe each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also see M.P.E.P. § 2131.

Claims 1-2, 5-6, and 46 recite “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the Non-Final Office Action dated May 15, 2003, it is stated that “...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed between one by one with

sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20).” However, Hashimoto et al. does not disclose a priming electrode or increasing an amount of priming particles in a discharge cell to reduce discharge lag.

Accordingly, Hashimoto et al. does not disclose the recitations of claims 1-2, 5-6, and 46 of “...a plurality of priming particles configured to increase amount of priming particles in a discharge cell to reduce discharge lag...” Therefore, a *prima facie* case of anticipation has not been established under 35 U.S.C. § 102, as Hashimoto et al. does not describe each and every element as set forth in claims 1-2, 5-6, and 46. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, Hashimoto et al. does not show the identical invention in as complete detail as contained in claims 1-2, 5-6, and 46. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). At least for these reasons, a *prima facie* case of anticipation has not been established in the rejection of claims 1-2, 5-6, and 46 under 35 U.S.C. § 102(e).

Argument 2) **The Examiner erred in the rejection of claims 7-14 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose “...a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag...”**

To establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must describe each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also see M.P.E.P. § 2131.

Claims 7-14 recite "...a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag..."

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the Non-Final Office Action dated May 15, 2003, it is stated that "...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed between one by one with sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20)." However, Hashimoto et al. does not disclose a priming electrode or increasing an amount of priming particles in a discharge cell to reduce discharge lag.

Accordingly, Hashimoto et al. does not disclose the recitations of claims 7-14 of "...a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag..." Therefore, a *prima facie* case of anticipation has not been established under 35 U.S.C. § 102, as Hashimoto et al. does not describe each and every

element as set forth in claims 7-14. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, Hashimoto et al. does not show the identical invention in as complete detail as contained in claims 7-14. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). At least for these reasons, a *prima facie* case of anticipation has not been established in the rejection of claims 7-14 under 35 U.S.C. § 102(e).

Argument 3) The Examiner erred in the rejection of claims 15-29 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose an “...electrode configured to increase the amount of priming particles in a discharge cell to reduce discharge lag...”

To establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must describe each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also see M.P.E.P. § 2131.

Claims 15-29 recite an “...electrode configured to increase the amount of priming particles in a discharge cell to reduce discharge lag...”

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the

Non-Final Office Action dated May 15, 2003, it is stated that "...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed between one by one with sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20)." However, Hashimoto et al. does not disclose increasing an amount of priming particles in a discharge cell to reduce discharge lag.

Accordingly, Hashimoto et al. does not disclose the recitations of claims 15-29 of an "...electrode configured to increase the amount of priming particles in a discharge cell to reduce discharge lag..." Therefore, a *prima facie* case of anticipation has not been established under 35 U.S.C. § 102, as Hashimoto et al. does not describe each and every element as set forth in claims 15-29. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, Hashimoto et al. does not show the identical invention in as complete detail as contained in claims 15-29. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). At least for these reasons, a *prima facie* case of anticipation has not been established in the rejection of claims 15-29 under 35 U.S.C. § 102(e).

Argument 4) **The Examiner erred in the rejection of claims 30-44 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose "...priming particles in a discharge cell in response to an electrical pulse applied to [an]...electrode to reduce discharge**

lag.”

To establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must describe each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also see M.P.E.P. § 2131.

Claims 30-44 recite "...priming particles in a discharge cell in response to an electrical pulse applied to [an]...electrode to reduce discharge lag.”

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the Non-Final Office Action dated May 15, 2003, it is stated that "...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed between one by one with sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20).” However, Hashimoto et al. does not disclose priming particles in a discharge cell to reduce discharge lag.

Accordingly, Hashimoto et al. does not disclose the recitations of claims 30-44 of "...priming particles in a discharge cell in response to an electrical pulse applied to [an]...electrode to reduce discharge lag.” Therefore, a *prima facie* case of anticipation has not been established under 35 U.S.C. § 102, as Hashimoto et al. does not describe each and every

element as set forth in claims 30-44. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, Hashimoto et al. does not show the identical invention in as complete detail as contained in claims 30-44. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). At least for these reasons, a *prima facie* case of anticipation has not been established in the rejection of claims 30-44 under 35 U.S.C. § 102(e).

Argument 5) The Examiner erred in the rejection of claim 45 under 35 U.S.C. § 102(e) because Hashimoto et al. (U.S. Patent No. 6,369,781) does not disclose "...a means of forming priming particles in [a] discharge cell to reduce discharge lag."

To establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must describe each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Also see M.P.E.P. § 2131.

Claim 45 recites "...a means of forming priming particles in [a] discharge cell to reduce discharge lag."

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the

Non-Final Office Action dated May 15, 2003, it is stated that "...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed between one by one with sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20)." However, Hashimoto et al. does not disclose forming priming particles in a discharge cell to reduce discharge lag.

Accordingly, Hashimoto et al. does not disclose the recitations of claim 45 of "...a means of forming priming particles in [a] discharge cell to reduce discharge lag." Therefore, a *prima facie* case of anticipation has not been established under 35 U.S.C. § 102, as Hashimoto et al. does not describe each and every element as set forth in claim 45. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, Hashimoto et al. does not show the identical invention in as complete detail as contained in claim 45. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). At least for these reasons, a *prima facie* case of anticipation has not been established in the rejection of claim 45 under 35 U.S.C. § 102(e).

Argument 6) **The Examiner erred in the rejection of claims 3 and 4 under 35 U.S.C. § 103(a) because neither Hashimoto et al. (U.S. Patent No. 6,369,781) nor Khan et al. (U.S. Patent No. 6,433,471) disclose "...a plurality of priming electrodes configured to increase**

**amount of priming particles in a discharge cell to reduce
discharge lag...”**

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation in the references themselves to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation of success for the modification or combination of references. The teaching or suggestion to make the modification or combination of prior art and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). There must be particular findings as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge to the claimed invention to combine or modify references. *In re Kotzab*, 217 F.3d 1365, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). Conclusory statements cannot be relied up for particular combinations of prior art and specific claims. *In re Lee* 277 F.3d 1338, 61U.S.P.Q.2d 1430 (Fed. Cir. 2002).

Claims 3 and 4 recite “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”

Hashimoto et al. relates to a method of driving a plasma display panel. On page 2 of the Non-Final Office Action dated May 15, 2003, it is stated that “...Hashimoto shows...[a] plurality of sustain electrodes and priming electrodes configured to increase the amount of

priming particles in a discharge cell to reduce discharge lag formed between one by one with sustain electrodes and a dielectric layer formed on the substrate to deposit the sustain and common electrodes (In fig. 2 and in col. 19, 20).” However, Hashimoto et al. does not disclose a priming electrode or increasing an amount of priming particles in a discharge cell to reduce discharge lag.

Kahn et al. relates to a plasma addressed liquid crystal display with glass spacers. Page 3 of the Non-Final Office Action dated May 15, 2003 states that “Kahn shows three layers structure (In col. 6 lines 65-67). It would have been obvious to one of ordinary skill in the art, at the time the invention was made to allow the teaching of Kahn’s into display system of Hashimoto’s because it would maintained a substantially parallel relationship in a plasma display.” However, this citation of Kahn et al. does not alleviate the deficiency of Hashimoto et al. of not disclosing “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”, as recited in claims 3 and 4. Further, there is not disclosure in Kahn et al. of “...a plurality of priming electrodes configured to increase amount of priming particles in a discharge cell to reduce discharge lag...”

Accordingly, neither Hashimoto et al. nor Kahn et al., alone or in combination, disclose the recitations of claims 3 and 4 of “...a plurality of priming particles configured to increase amount of priming particles in a discharge cell to reduce discharge lag...” A *prima facie* case of obviousness has not been established under 35 U.S.C. § 103, at least because neither Hashimoto et al. nor Kahn et al., alone or combination teach or suggest all the claimed limitations of claims

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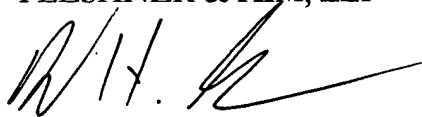
Docket No. K-229

3 and 4. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). At least for this reason, a *prima facie* case of obviousness has not been established under 35 U.S.C. § 103(a).

CONCLUSION

The Appellants respectfully request the Honorable Board of Appeals and Interferences of the U.S. Patent and Trademark Office to withdraw the rejections of claims 1-46 because neither a *prima facie* case of obviousness nor a *prima facie* case of anticipation has been established in these rejections.

Respectfully submitted,
FLESHNER & KIM, LLP



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Registration No. 36,186
Daniel H. Sherr
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Date: October 14, 2003

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APPENDIX

1. A plasma display panel comprising:
a plurality of sustain electrode pairs successively formed on an upper electrode;
a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag formed one by one between a pair of the sustain electrodes; and
a dielectric layer formed on the substrate to deposit the sustain electrodes and the priming electrodes.
2. The plasma display panel of claim 1, wherein the priming electrodes are commonly connected to a common node.
3. The plasma display panel of claim 1, wherein the priming electrodes are formed of a three-layered structure of Cr, Cu, and Cr sequentially deposited on the substrate.
4. The plasma display panel of claim 1, wherein the priming electrodes are formed of Ag.
5. The plasma display panel of claim 1, wherein the dielectric layer has a thickness of 10 μ m to 30 μ m.

6. The plasma display panel of claim 1, further comprising black matrixes formed between the substrate and the priming electrodes.

7. A method for driving a plasma display panel which includes a plurality of sustain electrode pairs successively formed on a substrate, a plurality of priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce discharge lag, wherein the priming electrodes are between a pair of the sustain electrodes, and a plurality of address electrodes formed to cross the sustain electrodes, the method comprising the steps of:

applying a common pulse, which is periodically turned on/off, to the priming electrodes;

applying a scan pulse to one of a pair of the sustain electrodes; and

applying an address pulse to the address electrodes when the scan pulse is applied to the one sustain electrode.

8. The method of claim 7, wherein the potential difference between on/off-periods of the common pulse is lower than a discharge start voltage of the plasma display panel.

9. The method of claim 8, wherein the potential difference is 270V or below.

10. The method of claim 7, wherein a width of the common pulse in the on-period is $1\mu\text{s}$ or below.

11. The method of claim 7, wherein the maximum potential difference between the scan pulse and the address pulse is more than the discharge start voltage of the plasma display panel.

12. The method of claim 7, wherein the maximum potential difference between the scan pulse and the address pulse is more than 280V.

13. The method of claim 7, wherein the time difference between the time when the common pulse is turned off and the time when the scan pulse is turned on is 500ns or below.

14. The method of claim 7, wherein the time difference between the time when the common pulse is turned off and the time when the address pulse is turned on is 500ns or below.

15. A plasma display panel comprising a first electrode configured to increase the amount of priming particles in a discharge cell to reduce discharge lag in response to an electrical pulse applied to the first electrode.

16. The plasma display panel of claim 15, wherein the electrical pulse is approximately 1 microsecond.

17. The plasma display panel of claim 15, wherein the electrical pulse is less than 1 microsecond.

18. The plasma display panel of claim 15, wherein priming particles comprise at least one of free electrons, ions, and quasi-stable atoms.

19. The plasma display panel of claim 15, wherein:
the discharge cell comprises a second electrode and a third electrode; and
the second electrode and the third electrode are configured to form wall charges proximate to the second electrode and the third electrode in response to a first voltage applied to the second electrode and a second voltage applied to the third electrode.

20. The plasma display panel of claim 19, wherein the second electrode is a scan electrode.

21. The plasma display panel of claim 19, wherein the third electrode is an address electrode.

22. The plasma display panel of claim 19, wherein the first voltage and the second voltage have opposite polarities.

23. The plasma display panel of claim 19, wherein a potential difference between the first voltage and the second voltage is greater than the magnitude of the electrical pulse applied to the first electrode.

24. The plasma display panel of claim 19, wherein the magnitude of the electrical pulse applied to the first electrode is less than or equal to 270 Volts.

25. The plasma display panel of claim 19, wherein the potential difference between the first voltage and the second voltage is greater than or equal to 180 Volts.

26. The plasma display panel of claim 19, wherein the first voltage is a negative voltage and the second voltage is a positive voltage.

27. The plasma display panel of claim 19, wherein the delay between the end of the electrical pulse and the start of the application of either the first voltage or the second voltage is approximately 500 nanoseconds.

28. The plasma display panel of claim 19, wherein the delay between the end of the electrical pulse and the start of the application of either the first voltage or the second voltage is less than 500 nanoseconds.

29. The plasma display panel of claim 19, wherein the start of the application of the first voltage and the start of the application of the second voltage occur at approximately the same time.

30. A method comprising priming particles in a discharge cell in response to an electrical pulse applied to a first electrode to reduce discharge lag.

31. The method of claim 30, wherein the electrical pulse is approximately 1 microsecond.

32. The method of claim 30, wherein the electrical pulse is less than 1 microsecond.

33. The method of claim 30, wherein priming particles comprise at least one of free electrons, ions, and quasi-stable atoms.

34. The method of claim 30, comprising forming, in the discharge cell, wall charges proximate to a second electrode and a third electrode in response to a first voltage applied to the second electrode and a second voltage applied to the third electrode.

35. The method of claim 34, wherein the second electrode is a scan electrode.

36. The method of claim 34, wherein the third electrode is an address electrode.

37. The method of claim 34, wherein the first voltage and the second voltage have opposite polarities.

38. The method of claim 34, wherein a potential difference between the first voltage and the second voltage is greater than the magnitude of the electrical pulse applied to the first electrode.

39. The method of claim 34, wherein the magnitude of the electrical pulse applied to the first electrode is less than or equal to 270 Volts.

40. The method of claim 34, wherein the potential difference between the first voltage and the second voltage is greater than or equal to 180 Volts.

41. The method of claim 34, wherein the first voltage is a negative voltage and the

second voltage is a positive voltage.

42. The method of claim 34, wherein the delay between the end of the electrical pulse and the start of the application of either the first voltage or the second voltage is approximately 500 nanoseconds.

43. The method of claim 34, wherein the delay between the end of the electrical pulse and the start of the application of either the first voltage or the second voltage is less than 500 nanoseconds.

44. The method of claim 34, wherein the start of the application of the first voltage and the start of the application of the second voltage occur at approximately the same time.

45. An apparatus comprising a discharge cell and a means of forming priming particles in the discharge cell to reduce discharge lag.

46. The plasma display panel of claim 1, wherein:
each of the plurality of sustain electrode pairs comprise a first electrode and a second electrode; and
each first electrode is commonly connected.